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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,857	09/25/2006	Michel Gillard	104991-161120	4435

24964 7590 02/05/2010
GOODWIN PROCTER LLP
ATTN: PATENT ADMINISTRATOR
620 Eighth Avenue
NEW YORK, NY 10018

EXAMINER	
USELDING, JOHN E	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
02/05/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/555,857	GILLARD ET AL.	
	Examiner	Art Unit	
	John Uselding	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-66* is/are pending in the application.

4a) Of the above claim(s) *29-50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *51-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *29-66* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/4/2009 has been entered.

Election/Restrictions

Newly submitted claims 29-50 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: there is a lack of unity among the claims. Claim 58 is anticipated by Slater et al. (5,331,074) and, therefore, there is not a common technical feature linking the claims.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 29-50 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Interpretations

Limitations such as "as a binder component" and "to help improve the film forming properties of the binder" are merely recitations of an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 58, 59, 61, 63, and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Slater et al. (5,331,074).

Regarding claims 58 and 61: Slater et al. teach compositions comprising a compound that is an organosilyl ester of a carboxylic acid wherein the carboxylic acid part of the ester is saturated at the alpha carbon (column 6, lines 46-68). Since the compound is being used as a crosslinking agent it is considered a binder component. Slater et al. teach that their composition is an anti-fouling paint composition (column 1, lines 5-13, 25-27; column 9, lines 30-36). The composition uses an excess of crosslinking agent (column 5, lines 34-53), therefore, after the crosslinking occurs there will still be remaining organosilyl esters of a carboxylic acid in the composition. The

organosilyl esters of Slater et al. are hydrolysable (column 2, lines 6-8). Also, the orgaopolysiloxane of Slater et al. is hydrolysable (column 3, lines 11-13; column 7, lines 11-15). Therefore it is a hydrolysable antifouling paint composition.

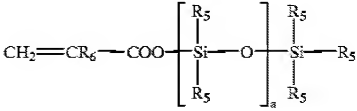
Regarding claim 59: the antifouling paint composition of Slater et al. comprises an antifoulant (column 1, lines 23-27; column 2, lines 51-62).

Regarding claim 63: Slater et al. teach an organosilyl ester of the formula $(Y^1)_aSi(OCOR^1)_{4-a}$ (column 6, lines 46-56). Y^1 is a hydrocarbon radical having 1 to 10 carbon atoms (column 6, lines 1-2). R^1 is a hydrocarbon group that is without aliphatic unsaturation (column 6, lines 48-52), which means that the alpha carbon is unsaturated. All the example compounds meet the Applicant's formula (column 6, lines 57-68).

Regarding claim 65: the binder of Slater et al. incorporates poly(silylesters) in it's organopolysiloxanes (column 2, lines 5-8, 49-52; Examples 13 and 14).

Claims 51, 54, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsumi et al. (6,031,019).

Regarding claim 51: Tsutsumi et al. teach an ink composition comprising the following organosilyl ester of carboxylic acid (column 5, lines 35-40):



An ink composition (column 1, lines 60-62) is considered a paint composition. The binder of Tsutsumi et al. also comprises other co-monomers (co-binders) (column 4, lines 53-54) that are vinyls such as vinyl pyridine (column 6, line 38; column 5, lines 8-10) and acrylates such as methyl acrylate (column 7, line 4). The composition also comprises polyesters (column 9, lines 22-25).

Regarding claim 54: The organosilyl ester shown above meets Applicant's formula (I).

Regarding claim 56: The binder of Tsutsumi et al. incorporates poly(silylesters) (column 4, line 53 to column 5, line 50).

Claims 58, 59, 63, 65, and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Itoh et al. (5,795,374).

Regarding claim 58: Itoh et al. teach a hydrolysable antifouling paint composition comprising a silyl ester of a monocarboxylic acid (Tables 1 and 2). Itoh et al. teach that their composition is an antifouling composition that is used to replace organotin polymers and compounds to avoid environmental pollution (column 1, lines 9-31).

Regarding claim 59: Itoh et al. teach that their composition also comprises antifoulants (column 8, lines 8-67)

Regarding claim 63: the monomers of Itoh et al. meet Applicant's formula (I) (Table 1).

Regarding claim 65: The silyl ester copolymers of Itoh et al. (Tables 2-3) also qualify as a poly(silylester).

Regarding claim 66: Itoh et al. teach using Dimerex in their composition (Tables 6 and 11). Dymerex is an abietyl dimer as shown by the Applicant's specification (0071).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slater et al. (5,331,074) as applied to claim 58 above.

Slater et al. teach using mixtures of crosslinking agents (column 6, lines 44-45).

Slater et al. fail to specifically teach using mixtures of silyl esters.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a mixture of acyloxysilane crosslinking agents (column 6, lines 46-67) in the composition to provide crosslinking of the polymers.

Claims 53 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (6,031,019) as applied to claim 58 above.

Regarding claim 53: Tsutsumi et al. teach using more than one of the silylester monomers (column 4, lines 53-59).

Tsutsumi et al. fail to specifically teach using a mixture of silyl esters of monocarboxylic acids.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a mixture of silylesters of the above compound where the "a" value varies to provide a vinyl polymer for the ink composition.

Regarding claim 55: The organosilyl ester shown above is a tri organo silyl compounds can be copolymerized with methyl acrylate (column 7, line 4) to make a tri organo silyl(meth)acrylate copolymer that is used as a part of the binder.

Tsutsumi et al. fail to specifically teach selecting silicone macromer (4-2) and methyl acrylate as the binder components.

Since silicone macromer (4-2) is selected from a list of 5 compounds and methyl acrylate is a preferred monomer it would have been obvious to one of ordinary skill in the art at the time the invention was made to select those components to make a tri organo silyl(meth)acrylate copolymer that is used as a part of the binder.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (6,031,019) as applied to claim 51 above in view of Grueninger (4,108,812), as evidenced by Healy (6,284,031).

Tsutsumi et al. teach adding various conventional additives to their ink composition (column 12, lines 1-9).

Not disclosed are abietyl dimers.

However, Grueninger teaches that adding Dymerex to aqueous printing inks will increase the binding properties (column 3, lines 46-52). Dymerex is an abietyl dimer as shown by the Applicant's specification (0071). Dymerex is also a conventional additive for printing inks as evidenced by Healy (column 5, lines 16-28). Tsutsumi et al. and Grueninger are analogous art because they are both concerned with the same field of endeavor, namely aqueous ink compositions that are used for printing.

At the time of the invention a person having ordinary skill in the art would have found it obvious to have combined the Dymerex of Grueninger with the composition of Tsutsumi et al. and would have been motivated to do so because it would improve the binding properties of the composition.

Claims 51 and 53-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. (5,795,374) in view of Plehiers et al. (WO 02/094838).

Regarding claims 51, 54, and 55: Itoh et al. teach a paint composition comprising a tri-organosilyl(meth)acrylate copolymer (Tables 1 and 2). Itoh et al. teach that their composition is an antifouling composition that is used to replace organotin polymers and compounds to avoid environmental pollution (column 1, lines 9-31). Itoh et al. teach that their composition also comprises organometallic antifoulants (column 8, lines 8-19) and that they desire to provide a replacement for organotin compounds (column 1, lines 25-27).

Itoh et al. fail to teach the claimed silyl esters in combination with the co-binder.

However, Plehiers et al. teach that a trialkysilylated carboxylate compound is useful in antifoulant paint compositions (page 8, lines 10-12) and can be used as a replacement for organotin compounds, since they are less toxic, less polar, more hydrophobic, and more stable (page 8, lines 24-29). Their compound is a silylester of a monocarboxylic acid and meets Applicant's formula (I) (page 3, lines 15-19).

Plehiers et al. and Itoh et al. are analogous art because both are concerned with the same field of endeavor, namely antifouling paint composition components that can replace organotin compounds. At the time of the invention, a person having ordinary skill in the art would have found it obvious to combine the trialkysilylated carboxylate compound, as disclosed by Plehiers et al., with the antifoulant paint composition as disclosed by Itoh et al. and would have been motivated to do so in order to provide an antifoulant that is less toxic, less polar, more hydrophobic, and more stable.

Regarding claim 53: Since the tri-organosilyl(meth)acrylate copolymer of Itoh et a. also qualifies as Applicant's silyl ester, therefore, there is a mixture of silylesters.

Regarding claim 56: The tri-organosilyl(meth)acrylate copolymer of Itoh et al. also qualifies as a poly(silylester).

Regarding claim 57: Itoh et al. teach using Dimerex in their composition (Tables 6 and 11). Dymerex is an abietyl dimer as shown by the Applicant's specification (0071).

Claims 60 and 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. (5,795,374) in view of Plehiers et al. (WO 02/094838).

Regarding claims 60, 63, and 64: Itoh et al. teach a paint composition comprising a tri-organosilyl(meth)acrylate copolymer (Tables 1 and 2). Itoh et al. teach that their composition is an hydrolysable antifouling composition that is used to replace organotin polymers and compounds to avoid environmental pollution (column 1, lines 9-31). Itoh et al. teach that their composition also comprises organometallic antifoulants (column 8, lines 8-19) and that they desire to provide a replacement for organotin compounds (column 1, lines 25-27).

Itoh et al. fail to teach the claimed silyl esters in combination with the co-binder.

However, Plehiers et al. teach that a trialkysilylated carboxylate compound is useful in antifoulant paint compositions (page 8, lines 10-12) and can be used as a replacement for organotin compounds, since they are less toxic, less polar, more hydrophobic, and more stable (page 8, lines 24-29). Their compound is a silylester of a monocarboxylic acid and meets Applicant's formula (I) (page 3, lines 15-19).

Plehiers et al. and Itoh et al. are analogous art because both are concerned with the same field of endeavor, namely antifouling paint composition components that can replace organotin compounds. At the time of the invention, a person having ordinary skill in the art would have found it obvious to combine the trialkysilylated carboxylate compound, as disclosed by Plehiers et al., with the antifoulant paint composition as disclosed by Itoh et al. and would have been motivated to do so in order to provide an antifoulant that is less toxic, less polar, more hydrophobic, and more stable.

Regarding claim 62: Since the tri-organosilyl(meth)acrylate copolymer of Itoh et a. also qualifies as Applicant's silyl ester, therefore, there is a mixture of silylesters.

Claims 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimakura et al. (WO 2002/031065) in view of Van Ooij et al. (WO 2001/06036). US 2004/0009300 is being used as an English equivalent for WO 2002/031065 since it is a national stage entry of the international application.

Regarding claims 51, 52, and 54: Shimakura et al. teach a paint composition for metal surfaces [0002, 0009, 0109, 0114] comprising acrylates [0042-0043, 0115, and Examples] or polyesters [0114] and an acyloxysilane [0055, 0112, 0144-0164]. Shimakura et al. teach that their silanes are added to prevent corrosion [0026] and improve the adhesion of organic coating [0038].

Shimakura et al. fail to teach the specific structure of the acyloxysilanes used.

However, Van Ooij et al. teach a coating composition for metal surfaces comprising acyloxysilanes (page 1, lines 5-11). The structures taught by Van Ooij et al. are all silyl esters of monocarboxylic acids that are saturated at the alpha carbon (claim 52)(page 5, line 21 to page 6, line 4 and claim 6). Van Ooij et al. teach bis-(triacetoxysilyl)ethane (column 7, lines 1-5 and claim 11), which meets applicants formula (I) of claim 54).

Van Ooij et al. and Shimakura et al. are analogous art because both are concerned with the same field of endeavor, namely coating compositions for metals comprising acyloxysilanes to inhibit corrosion. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use the acyloxysilanes, as disclosed by Van Ooij et al., as the acyloxysilanes of Shimakura et al. and would have

been motivated to do so in order to provide anticorrosion and improve the adhesion of the organic coating.

Regarding claim 53: Shimakura et al. teach using a mixture of silanes [0055, 0112].

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 58, 59, 62, and 63 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 8-13, and 17-52 of copending Application No. 11/726130. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims an antifouling paint compositions comprising a silylester of

monocarboxylic acid that meet's Applicant's formula 1 (claims 1, 9, 17, and 18). The copending application claims an antifoulant (claims 9, 18). The copending application claims mixtures of the silylesters (claim 19).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 12/4/2009 have been fully considered but they are not persuasive.

The Applicant has asserted that Slater does not teach hydrolysable antifouling paint compositions. This is not persuasive because Slater teaches antifouling paint compositions (column 1, lines 5-13, 25-27; column 9, lines 30-36) that are hydrolysable (column 2, lines 6-8; column 3, lines 11-13; column 7, lines 11-15).

The remainder of the Applicant's remarks are moot due to the new grounds of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Uselding whose telephone number is (571)270-5463. The examiner can normally be reached on Monday-Thursday 6:00am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 1796

/JU/
Examiner
Art Unit 1796